



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/623,941 | 07/21/2003 | Michael R. Foster | DP-309380 | 6481 |

7590 02/23/2005
Jimmy L. Funke
Delphi Technologies, Inc.
M/C 480-410-202
P.O. Box 5052
Troy, MI 48007

EXAMINER

TRAN, DIEM T

ART UNIT PAPER NUMBER

3748

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/623,941

Applicant(s)

FOSTER, MICHAEL R.

Examiner

Diem Tran

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

This office action is in response to the amendment filed on 11/29/04. In this amendment, claims 1, 12, 15, 17, 23-25 have been amended. Overall, claims 1-25 are pending in this application.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5-21, 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Hayman et al. (US Patent 6,668,546).

Regarding claims 1, 5-7, 9-13, 15-18, 20-21, 23, 24, Hayman discloses an exhaust system for a vehicle having an internal combustion engine with a plurality of cylinders, comprising:

an exhaust manifold for providing fluid communication of exhaust of the plurality of cylinders to a catalytic converter (22), said exhaust manifold comprising a first exhaust pipe portion and a second exhaust pipe portion (see Figure 1), said first exhaust pipe portion being in fluid communication with said second exhaust pipe portion and said second exhaust pipe portion being in fluid communication with said catalytic converter, said first and second exhaust pipe portion providing a first and second fluid path for exhaust of a first and second plurality of cylinders of the engine, said second fluid path is shorter than the first fluid path (see Figure 1);

Art Unit: 3748

and a controller for determining whether to deactivate said first plurality of cylinders in accordance with a predetermined engine starting condition, wherein deactivation of said first plurality of cylinders causes said second plurality of cylinders to operate at a condition corresponding to an engine output demand (see col. 5, lines 51-56, col. 7, lines 44-62); wherein an exhaust of a first temperature is expelled by said second activated plurality of cylinders into said catalytic converter, said first temperature being greater than an exhaust temperature that would be generated by said first and said second plurality of cylinders operating at said condition corresponding to said engine output demand; wherein the efficiency of said catalytic converter at engine start-up is increased as the catalytic converter will be brought to an operating temperature faster than a time required if no cylinders were deactivated and engine exhaust is flowing through both said first fluid path and said second fluid path (see col. 2, lines 54-61).

Regarding claim 2, Hayman further discloses that said first plurality of cylinders and said second plurality of cylinders are on opposite sides of the engine (see Figure 1).

Regarding claims 8, 14, 19, Hayman further discloses that said controller deactivates said predetermined cylinders by closing intake and exhaust valves of said predetermined cylinders (see col. 5, lines 49-51).

Regarding claims 22, 25, Hayman further discloses activating said predetermined cylinders and deactivating the remaining cylinders when said catalytic converter has reached an effective operating temperature (see col. 7, lines 40-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayman et al. (US Patent 6,668,546) in view of design choice.

Regarding claims 3, 4, Hayman discloses all the claimed limitations as discussed in claim 1 above; however, fails to disclose that said first plurality of cylinders and said second plurality of cylinders are on the same side of the engine.

With regard to the limitation directed to the position of the first and second group of cylinders, it is the examiners position that the such would have been an obvious matter of design choice well within the level of ordinary skill in the art depending on the preferred shape of the engine (V-shape or straight type engine), etc...Moreover, there is nothing in the record which establishes that the claimed ranges present a novel or unexpected result (see In re Kuhle, 526 F.2d 553, 188 USPQ 7(CCPA 1975)).

Response to Arguments

Applicant's arguments filed on 11/29/04 have been fully considered but they are moot in view of a new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Conclusion

Any inquiry concerning this communication from the examiner should be directed to Examiner Diem Tran whose telephone number is (571) 272-4866. The examiner can normally be reached on Monday -Friday from 8:30 a.m.- 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for

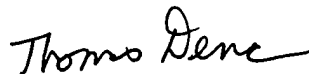
Art Unit: 3748

unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DT
February 18, 2005



Diem Tran
Patent Examiner
Art unit 3748



THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700